

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 5-9, 18 and 19 are pending in the application. Claims 16 and 17 are cancelled and new claims 18 and 19 are added. Claims 9-14 are amended. Support for the amendments of independent claim 9 is found in at least page 8, line 25 to page 14, line 27 of the specification submitted on June 16, 2006.

Information Disclosure Statement

Applicant respectfully submits that the present application is an entry of the National Phrase of a corresponding PCT application and copies of the references cited were transmitted by WIPO and are believed to be in the file of the above-identified application and are readily available to the Examiner. The objection to the information disclosure statement of the present application should be withdrawn.

Additionally, US Patent Application Serial No. 10/445,436 (Pub. No.: US 2003/0222778 A1), as correctly listed on the Information Disclosure Statement PTO-1449 form submitted June 16, 2006, was properly identified and should be considered by the PTO. Withdrawal of the objection to the IDS is respectfully requested at least with respect to this document.

Specification

In response to the objection to the abstract, a new replacement abstract is submitted having a length less than 150 words. Thus, the objection to the abstract should be withdrawn.

In response to the objection to the specification of the present application, the identified informalities as denoted by the Examiner and additional typographic errors have been corrected and the objections should be withdrawn.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the reference sign(s) mentioned in the description. In response, replacement sheets of the drawings are submitted herewith, which include the reference signs denoted by the Examiner and replacing Figures 2 and 4. Thus, the objections to the drawings should be withdrawn.

Claim Objections

Claims 9 and 16 are objected to because of the informalities. Claim 9 is amended to cure the informalities, as suggested by the Examiner. Claim 16 is cancelled by this amendment. Therefore, the objection of claims 9 and 16 should be withdrawn.

Claim Rejection – 35 USC § 112

Claim 14 is rejected under 35 U.S.C. 112 because of the dependency of claim 14. In response, the dependency of claim 14 is amended, as suggested by the Examiner, and the rejection of claim 14 should be withdrawn.

Claim 17 is rejected under 35 U.S.C. 112 as lacking sufficient antecedent basis for the claimed limitations of claim 17. By this amendment, claim 17 is cancelled and the rejection of claim 17 should be withdrawn.

Claim Rejection - 35 USC § 102

Claim 9 is rejected under 35 USC §102(b) as being anticipated by Walsh (U.S. 3,886,487). Applicant respectfully traverses this rejection based on the foregoing amendments and the reasons discussed below.

Claim 9, as amended, now recites “said processing means implementing a process for determining the position of said object comprising the two following stages:

a first stage, during which a coarse determination of the position of the object is carried out by calculation of the difference ($T_2 - T_1$) of the propagation times of the waves;

a second stage during which the position of the object is determined in a more precise manner by calculation of the differential Doppler frequency Δf_d of the waves from the frequencies F_1 and F_2 transmitted by the transmitters, and from the frequencies Fr_1 and Fr_2 received by the receiver, said differential Doppler frequency Δf_d being defined by the following relation:

$$\Delta f_d = \Delta Fr - \Delta F$$

wherein

$$\Delta Fr = Fr_2 - Fr_1 \text{ and } \Delta F = F_2 - F_1. ”$$

The above limitations find support in at least page 8, line 25 to page 14, line 27 of the clean version of the specification submitted on June 16, 2006. The device according at least one embodiment of the present application comprises means for implementing a process comprising two stages. In a first stage, when the object is far enough from the ship, a coarse calculation of the position of the object is carried out by analyzing the difference ($T_2 - T_1$) between the durations for the waves, transmitted by the two transmitters and reflected by the object, to be received. This coarse calculation is sufficient for objects located far enough from the ship. Then in a second stage, the position of the object is determined in a more precise manner by analyzing the

difference between the Dopplers of the waves, which is called “the differential Doppler frequency.” Then, integrating the difference ($T_2 - T_1$) with the information result from “the differential Doppler frequency,” it is possible to determine angles θ_1 , θ_2 , θ_0 and θ'_0 , which correspond respectively to the incident and reflected angles and then to determine the exact coordinates X and Y of the object.

Applicant respectfully submits that Walsh fails to disclose the above limitations, as recited in claim 9. This is because Walsh does not calculate the temporal deviation by using Doppler Frequency Deviation between the two waves reflected by the object. Walsh merely mentions using Doppler Sonar for detecting the speed of the ship and the depth of the ocean and nowhere does Walsh mention using “differential Doppler frequency” as claimed in claim 9.

Based on the above reasons, Walsh fails to disclose all of the limitations recited in claim 9. Thus, the anticipation rejection of claim 9 should be withdrawn.

Claim Rejection - 35 USC § 103

Claims 10-12 are rejected under 35 USC §103(a) as being unpatentable over Walsh (U.S. 3,886,487) in view of Klein (U.S. 3,832,709). Klein fails to cure the above-noted deficiency of Walsh. Applicant respectfully traverses this rejection for the reasons discussed below.

Claim 10 recites additional limitations and should be patentable for the reasons discussed above with respect to claim 9 as well as on its own merits.

Claim 11, as amended, is rewritten into independent claim form and now includes at least the similar limitations as claim 9. Thus, claim 11 is patentable over Walsh and Klein for at least the same reasons with respect to claim 9.

Claim 12 recites additional limitations and should be patentable for the reasons discussed above with respect to claim 11 as well as on its own merits.

Therefore, the rejection of claims 10-12 should be withdrawn.

Claims 13, 14 and 16 are rejected under 35 USC §103(a) as being unpatentable over Walsh (U.S. 3,886,487) in view of Lang (U.S. 3,623,444). Applicant respectfully traverses this rejection.

Claim 13 recites additional limitations and should be patentable for the reasons discussed above with respect to claim 11 as well as on its own merits.

Claim 14 recites additional limitations and should be patentable for the reasons discussed above with respect to claim 11 as well as on its own merits.

By this amendment, claim 16 is cancelled and the rejection of claim 16 is now deemed moot and the rejection of claims 13, 14 and 16 should be withdrawn.

Claim 15 is rejected under 35 USC §103(a) as being unpatentable over Walsh (U.S. 3,886,487) in view of Miura (U.S. 3,673,553). Applicant respectfully traverses this rejection.

Claim 15 recites additional limitations and should be patentable for the reasons discussed above with respect to claim 9 as well as on its own merits and the rejection of claim 15 should be withdrawn

Claim 17 is rejected under 35 USC §103(a) as being unpatentable over Walsh (U.S. 3,886,487) in view of Miura (U.S. 3,673,553), and further in view of Klein (U.S. 3,832,708) and Kaplan (U.S. 4,290,043). By this amendment, claim 17 is cancelled and the rejection of claim 17 is now deemed moot.

New claims 18 and 19 depend from claim 11 and should be patentable for the reasons discussed above with respect to claim 11 as well as on their own merits.

All objections and rejections having been addressed, it is respectfully submitted that the present application should be in condition for allowance and a Notice to that effect is earnestly solicited.

Early issuance of a Notice of Allowance is courteously solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136

is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

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